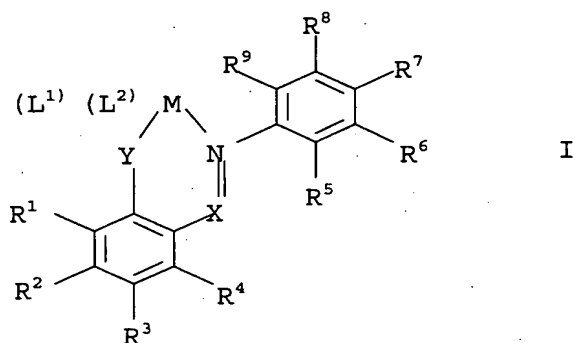


IN THE CLAIMS

Claim 1 (Currently Amended): A process for preparing an aqueous polymer dispersion, by polymerizing a miniemulsion having an average droplet diameter  $\leq 1000$  nm of one or more olefins in an aqueous medium in the presence of one or more dispersants, and, optionally, of organic solvents, said process comprising catalyzing the polymerization of said one or more olefins using in the presence of one or more metal complex compounds of the formula I:



wherein the substituents and indices have the following meanings:

M is a transition metal from groups 7 to 10 of the periodic table of the elements;

L<sup>1</sup> denotes phosphanes (R<sup>16</sup>)<sub>x</sub>PH<sub>3-x</sub> or amines (R<sup>16</sup>)<sub>x</sub>NH<sub>3-x</sub> with identical or different radicals R<sup>16</sup>, ethers (R<sup>16</sup>)<sub>2</sub>O, H<sub>2</sub>O, alcohols (R<sup>16</sup>)OH, pyridine, pyridine derivatives of the formula C<sub>5</sub>H<sub>5-x</sub>(R<sup>16</sup>)<sub>x</sub>N, CO, C<sub>1</sub>-C<sub>12</sub> alkylnitriles, C<sub>6</sub>-C<sub>14</sub> aryl nitriles or ethylenically unsaturated double bond systems, x denoting an integer from 0 to 3;

$L^2$  denotes halide ions, amide ions  $(R^{16})_hNH_{2-h}$ ,  $h$  denoting an integer from 0 to 2, and also  $C_1$ - $C_6$  alkyl anions, allyl anions, benzyl anions or aryl anions,

and optionally,  $L^1$  and  $L^2$  may be linked to one another by one or more covalent bonds;

X: is CR or nitrogen atom (N);

R: is hydrogen,

$C_1$ - $C_6$  alkyl groups,

$C_7$ - $C_{13}$  aralkyl radicals, or

$C_6$ - $C_{14}$  aryl groups, unsubstituted or substituted by one or more  $C_1$ - $C_{12}$  alkyl groups, halogens, mono- or polyhalogenated  $C_1$ - $C_{12}$  alkyl groups,  $C_1$ - $C_{12}$  alkoxy groups, silyloxy groups  $OSiR^{11}R^{12}R^{13}$ , amino groups  $NR^{14}R^{15}$  or  $C_1$ - $C_{12}$  thioether groups;

Y: is OH group, oxygen, sulfur,  $N-R^{10}$  or  $P-R^{10}$ ;

N: is nitrogen atom;

$R^1$  to  $R^9$ : are, independently of one another, hydrogen,

$C_1$ - $C_{12}$  alkyl, wherein the alkyl groups may be branched or unbranched,

$C_1$ - $C_{12}$  alkyl, substituted one or more times by identical or different

substituents, selected from the group consisting of  $C_1$ - $C_{12}$  alkyl groups,

halogens,  $C_1$ - $C_{12}$  alkoxy groups and  $C_1$ - $C_{12}$  thioether groups,

C<sub>7</sub>-C<sub>13</sub> aralkyl,

C<sub>3</sub>-C<sub>12</sub> cycloalkyl,

C<sub>3</sub>-C<sub>12</sub> cycloalkyl, substituted one or more times by identical or different substituents, selected from the group consisting of C<sub>1</sub>-C<sub>12</sub> alkyl groups, halogens, C<sub>1</sub>-C<sub>12</sub> alkoxy groups and C<sub>1</sub>-C<sub>12</sub> thioether groups,

C<sub>6</sub>-C<sub>14</sub> aryl,

C<sub>6</sub>-C<sub>14</sub> aryl, substituted by identical or different substituents, selected from one or more members of the group consisting of C<sub>1</sub>-C<sub>12</sub> alkyl groups, halogens, mono- or polyhalogenated C<sub>1</sub>-C<sub>12</sub> alkyl groups, C<sub>1</sub>-C<sub>12</sub> alkoxy groups, silyloxy groups OSiR<sup>11</sup>R<sup>12</sup>R<sup>13</sup>, amino groups NR<sup>14</sup>R<sup>15</sup> and C<sub>1</sub>-C<sub>12</sub> thioether groups,

C<sub>1</sub>-C<sub>12</sub> alkoxy groups,

silyloxy groups OSiR<sup>11</sup>R<sup>12</sup>R<sup>13</sup>,

halogens,

NO<sub>2</sub> groups, or

amino groups NR<sup>14</sup>R<sup>15</sup>,

and wherein two adjacent radicals R<sup>1</sup> to R<sup>9</sup>, may optionally form with one another, a saturated or unsaturated 5- to 8-membered ring;

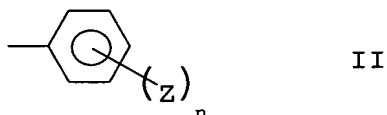
R<sup>10</sup> to R<sup>16</sup> independently of one another, are hydrogen,

C<sub>1</sub>-C<sub>20</sub> alkyl groups, which may optionally be substituted by O(C<sub>1</sub>-C<sub>6</sub> alkyl) or N(C<sub>1</sub>-C<sub>6</sub> alkyl)<sub>2</sub> groups,

C<sub>3</sub>-C<sub>12</sub> cycloalkyl groups,

C<sub>7</sub>-C<sub>13</sub> aralkyl radicals or C<sub>6</sub>-C<sub>14</sub> aryl groups;

and wherein at least one of the radicals  $R^1$  to  $R^9$  is in the form of a radical of the formula II below:



wherein Z is an electron-withdrawing group, and n is an integer from 1 to 5.

Claim 2 (Previously Presented): The process as claimed in claim 1, wherein Z in formula II is selected from one of the following electron-withdrawing radicals:

$\text{NO}_2$ ,  $\text{SO}_3$ , F,  $\text{C}_m\text{F}_{2m+1}$ , where m is an integer from 1 to 10, or a mono- or polyfluorinated aryl.

Claim 3 (Previously Presented): The process as claimed in claim 1, wherein Z in the formula II is  $\text{CF}_3$ , and n is 2 or 3.

Claim 4 (Previously Presented): The process as claimed in claim 1, wherein the metal complex compound is used in combination with an activator.

Claim 5 (Previously Presented): The process as claimed in claim 1, wherein M in the formula I is nickel or palladium.

Claim 6 (Previously Presented): The process as claimed in claim 1, wherein ethylene is used exclusively as olefin.

Claim 7 (Previously Presented): The process as claimed in claim 1, wherein at least two olefins are used, selected from the group consisting of ethylene, propylene, 1-butene, 1-hexene, and styrene.

Claim 8 (Previously Presented): The process as claimed in claim 7, wherein ethylene is used in combination with propylene, 1-butene, 1-hexene or styrene.

Claim 9 (Previously Presented): The process as claimed in claim 1, wherein anionic, cationic and/or nonionic emulsifiers are used as the one or more dispersants.

Claim 10 (Previously Presented): The process as claimed in claim 1, wherein aliphatic and aromatic hydrocarbons, fatty alcohols or fatty acids are used as organic solvents.

Claim 11 (Previously Presented): An aqueous dispersion of a polyolefin or copolymer of two or more olefins, obtained by the process as claimed in claim 1.

Claim 12 (Previously Presented): An aqueous dispersion of a polyethylene or copolymer of ethylene, obtained by the process as claimed in claim 1.

Claim 13 (Canceled).

Claim 14 (Previously Presented): A method of coating paper, comprising, applying the aqueous dispersion, as claimed in claim 11, to a paper substrate.

Claim 15 (Canceled).

Claim 16 (Previously Presented): A method of sizing a surface, comprising, contacting the aqueous dispersion, as claimed in claim 11, with the surface of a substrate.

Claim 17 (Previously Presented): A method of treating a textile, leather or a carpet backing, comprising, contacting the aqueous dispersion, as claimed in claim 11, with a substrate.

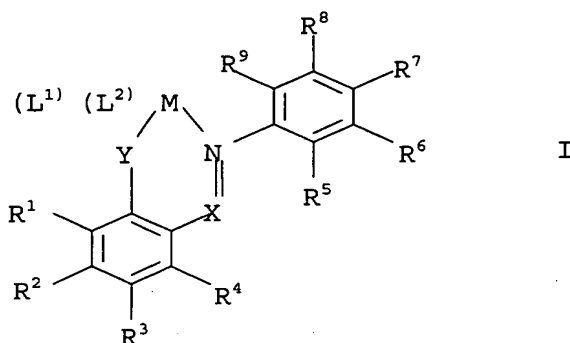
Claim 18 (Previously Presented): A method of preparing a molded foam, comprising, molding a composition comprising the aqueous dispersion of claim 11 and one or more additives.

Claim 19 (Previously Presented): A paint, varnish or adhesive, comprising the aqueous dispersion of claim 11 and one or more additives.

Claim 20 (Previously Presented): A pharmaceutical composition, comprising the aqueous dispersion of claim 11 and one or more additives.

Claim 21 (Currently Amended): A process for preparing an aqueous polymer dispersion, by polymerizing one or more olefins in an aqueous medium in the presence of one or more dispersants, and, optionally, of organic solvents, said process comprising catalyzing

the polymerization of said one or more olefins using in the presence of one or more metal complex compounds of the formula I:



wherein the substituents and indices have the following meanings:

M is a transition metal from groups 7 to 10 of the periodic table of the elements;

$L^1$  denotes phosphanes  $(R^{16})_xPH_{3-x}$  or amines  $(R^{16})_xNH_{3-x}$  with identical or different radicals  $R^{16}$ , ethers  $(R^{16})_2O$ ,  $H_2O$ , alcohols  $(R^{16})OH$ , pyridine, pyridine derivatives of the formula  $C_5H_{5-x}(R^{16})_xN$ , CO,  $C_1$ - $C_{12}$  alkylnitriles,  $C_6$ - $C_{14}$  arylnitriles or ethylenically unsaturated double bond systems, x denoting an integer from 0 to 3;

$L^2$  denotes halide ions, amide ions  $(R^{16})_hNH_{2-h}$ , h denoting an integer from 0 to 2, and also  $C_1$ - $C_6$  alkyl anions, allyl anions, benzyl anions or aryl anions,

and optionally,  $L^1$  and  $L^2$  may be linked to one another by one or more covalent bonds;

X: is nitrogen atom (N);

R: is hydrogen,

C<sub>1</sub>-C<sub>6</sub> alkyl groups,

C<sub>7</sub>-C<sub>13</sub> aralkyl radicals, or

C<sub>6</sub>-C<sub>14</sub> aryl groups, unsubstituted or substituted by one or more C<sub>1</sub>-C<sub>12</sub> alkyl

groups, halogens, mono- or polyhalogenated C<sub>1</sub>-C<sub>12</sub> alkyl groups, C<sub>1</sub>-C<sub>12</sub>

alkoxy groups, silyloxy groups OSiR<sup>11</sup>R<sup>12</sup>R<sup>13</sup>, amino groups NR<sup>14</sup>R<sup>15</sup> or C<sub>1</sub>-

C<sub>12</sub> thioether groups;

Y: is OH group, oxygen, sulfur, N-R<sup>10</sup> or P-R<sup>10</sup>;

N: is nitrogen atom;

R<sup>1</sup> to R<sup>9</sup>: are, independently of one another, hydrogen,

C<sub>1</sub>-C<sub>12</sub> alkyl, wherein the alkyl groups may be branched or unbranched,

C<sub>1</sub>-C<sub>12</sub> alkyl, substituted one or more times by identical or different

substituents, selected from the group consisting of C<sub>1</sub>-C<sub>12</sub> alkyl groups,

halogens, C<sub>1</sub>-C<sub>12</sub> alkoxy groups and C<sub>1</sub>-C<sub>12</sub> thioether groups,

C<sub>7</sub>-C<sub>13</sub> aralkyl,

C<sub>3</sub>-C<sub>12</sub> cycloalkyl,

C<sub>3</sub>-C<sub>12</sub> cycloalkyl, substituted one or more times by identical or different

substituents, selected from the group consisting of C<sub>1</sub>-C<sub>12</sub> alkyl groups,

halogens, C<sub>1</sub>-C<sub>12</sub> alkoxy groups and C<sub>1</sub>-C<sub>12</sub> thioether groups,



C<sub>6</sub>-C<sub>14</sub> aryl,

C<sub>6</sub>-C<sub>14</sub> aryl, substituted by identical or different substituents, selected from one or more members of the group consisting of C<sub>1</sub>-C<sub>12</sub> alkyl groups, halogens, mono- or polyhalogenated C<sub>1</sub>-C<sub>12</sub> alkyl groups, C<sub>1</sub>-C<sub>12</sub> alkoxy groups, silyloxy groups OSiR<sup>11</sup>R<sup>12</sup>R<sup>13</sup>, amino groups NR<sup>14</sup>R<sup>15</sup> and C<sub>1</sub>-C<sub>12</sub> thioether groups,

C<sub>1</sub>-C<sub>12</sub> alkoxy groups,

silyloxy groups OSiR<sup>11</sup>R<sup>12</sup>R<sup>13</sup>,

halogens,

NO<sub>2</sub> groups, or

amino groups NR<sup>14</sup>R<sup>15</sup>,

and wherein two adjacent radicals R<sup>1</sup> to R<sup>9</sup>, may optionally form with one another, a saturated or unsaturated 5- to 8-membered ring;

R<sup>10</sup> to R<sup>16</sup> independently of one another, are hydrogen,

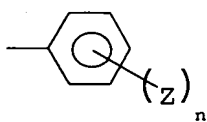
C<sub>1</sub>-C<sub>20</sub> alkyl groups, which may optionally be substituted by O(C<sub>1</sub>-C<sub>6</sub> alkyl) or

N(C<sub>1</sub>-C<sub>6</sub> alkyl)<sub>2</sub> groups,

C<sub>3</sub>-C<sub>12</sub> cycloalkyl groups,

C<sub>7</sub>-C<sub>13</sub> aralkyl radicals or C<sub>6</sub>-C<sub>14</sub> aryl groups;

and wherein at least one of the radicals R<sup>1</sup> to R<sup>9</sup> is in the form of a radical of the formula II below:



II

wherein Z is an electron-withdrawing group, and n is an integer from 1 to 5.